

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Meikrantz et al.

Serial No.: Not Yet Assigned

Filed: _____

For: CESIUM AND STRONTIUM EXTRACTION USING A MIXED EXTRACTANT SOLVENT INCLUDING CROWN ETHER AND CALIXARENE EXTRACTANTS

Confirmation No.: Unknown

Examiner: Unknown

Group Art Unit: Unknown

Attorney Docket No.: B-424

NOTICE OF EXPRESS MAILING

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INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In compliance with the duty to disclose information material to patentability pursuant to 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure Statement be entered and the documents listed on attached Form PTO-1449 or PTO/SB/08 be considered by the Examiner and made of record. Copies of the listed documents are enclosed pursuant to 37 C.F.R. § 1.98(a).

In accordance with 37 C.F.R. § 1.97(g) and (h), filing of this Information Disclosure Statement is not to be construed as a representation that a search has been made or an admission

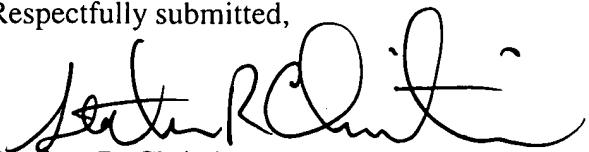
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that the information cited herein is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b). Further, no representation is made by Applicants herein that no other possible material information as defined in 37 C.F.R. § 1.56(b) exists.

Applicants offer to supply any explanation or discussion of the documents that the Examiner feels is necessary or desirable and which is requested.

This Information Disclosure Statement is filed within three (3) months of the filing date of the above-identified application, and no certification pursuant to 37 C.F.R. § 1.97(c) or a fee pursuant to 37 C.F.R. § 1.17(p) is required.

Respectfully submitted,



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Date: 23 MAR 2004

Enclosures: Form PTO-1449 or PTO/SB/08
Cited Documents

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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<i>Complete if Known</i>	
Application Number	Not Yet Assigned
Filing Date	
First Named Inventor	Meikrantz et al.
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	B-424

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
		US-4,749,518	06/07/1988	Davis, Jr. et al.	
		US- 5,344,623	09/06/1994	Horwitz et al.	
		US- 5,346,618	09/13/1994	Horwitz et al.	
		US- 5,393,892	02/28/1995	Krakowiak et al.	
		US- 5,607,591	03/04/1997	Dozol et al.	
		US- 5,666,641	09/09/1997	Abney et al.	
		US- 5,666,642	09/09/1997	Hawthorne et al.	
		US- 5,698,169	12/16/1997	Hawthorne et al.	
		US 5,888,398	03/30/1999	Dietz et al.	
		US- 5,926,687	07/20/1999	Dozol et al.	
		US- 6,040,462	03/21/2000	Oh et al.	
		US- 6,174,503 B1	01/16/2001	Moyer et al.	
		US- 6,258,333 B1	07/10/2001	Romanovskiy et al.	
		US- 6,270,737 B1	08/07/2001	Zaitsev et al.	
		US- 2001/0033814 A1	10/25/2001	Romanovskiy et al.	
		US- 6,468,445 B2	10/22/2002	Romanovskiy et al.	
		US- 6,511,603 B1	01/28/2003	Dietz et al.	
		US- 6,566,561 B1	05/20/2003	Bonnesen et al.	
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Signature		Date Considered	
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Group Art Unit	Unknown
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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		LEONARD et al., "Development of a Solvent Extraction Process for Cesium Removal From SRS Tank Waste," Sep. Sci. and Technol., 36(5-6):743-766 (2001).	
		LEONARD et al., "Experimental Verification of Caustic-Side Solvent Extraction for Removal of Cesium from Tank Waste," Solvent Extr. and Ion Exch. 21(4):505-526 (2003).	
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		NORATO et al., "Demonstration of the Caustic-Side Solvent Extraction Process for the Removal of ¹³⁷ Cs from Savannah River Site High Level Waste," Sep. Sci. and Technol., 38(12-13):2647-2666 (2003).	
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		TANIGAWA et al., "Solvent Extraction of Alkali Metals by Crown Ethers," Chem. Eng. J., 39:157-168 (1988).	
		WHITE et al., "Stability Study of Cs Extraction Solvent," Sep. Sci. and Technol., 38(12-13):2667-2683 (2003).	
		WOOD et al., "Effect of the Interference of Alkali and Alkaline Earth Metal Ions on the Extraction of ⁹⁰ Sr From Acidic Nuclear Waste Solutions by 18-crown-6 Derivatives," Solvent Ext. and Ion Exch., 13(5), 829-844 (1995).	
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		BONNESEN et al., "Alkaline-Side Extraction of Cesium from Savannah River Tank Waste Using a Calixarene-Crown Ether Extractant," ORNL/TM-13704, Oak Ridge National Laboratory: Oak ridge, TN, pp. ii-102 (Dec 1998).	
		BONNESEN et al., "Development of Process Chemistry for the Removal of Cesium from Acidic Nuclear Waste by Calix[4]arene-crown-6 Ethers," ACS Sym. Ser. 757 (Calixarenes for Separations), Am. Chem. Soc., pp. 26-44 (2000).	
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		DOZOL et al., "A Solution for Cesium Removal from High-Salinity Acidic or Alkaline Liquid Waste: The Crown Calix[4]Arenes," Sep. Sci. and Technol., 34(6&7):877-909 (1999).	
		DUCHEMIN et al., "Solvatochromic Solvent Polarity Measurements of Alcohol Solvent Modifiers and Correlation with Cesium Extraction Strength," Solvent Extr. and Ion Exch., 19(6):1037-1058 (2001).	
		GUPTA, et al., "Effect of Diluents on the Extraction of Sr ²⁺ from HNO ₃ Solutions with Dicyclohexano-18-crown-6," Solvent Extr. and Ion Exch., 21(1), 53-71 (2003).	
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		LAMB et al., "Novel Solvent System for Metal Ion Separation: Improved Solvent Extraction of Strontium(II) and Lead (II) as Dicyclohexano-18-crown-6 Complexes," Sep. Sci. and Technol., 34(13):2583-2599 (1999).	

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